

Ser. No. 10/652,643

Amendments to the Specification

Please amend the following paragraphs of the specification (numbered as-published whereas the as-filed numbering is two less):

[0005] One aspect of the invention involves a method for casting a number of blades, each having an airfoil and a root for securing the blade to a separate disk. A ~~number~~ plurality of mold sections are formed each having internal surfaces for forming an associated at least one of the blades. A ~~number~~ plurality of the mold sections are assembled. Molten alloy is introduced to the assembled mold sections.

[0006] In various implementations, the alloy may be simultaneously introduced to the assembled mold sections. Each of the sections may have internal surfaces for forming only a single associated blade. The surfaces of each of the mold sections may include first surfaces (e.g., of a mold shell) for forming an exterior of the associated blade and second surfaces (e.g., of a ceramic core) for forming an interior of the associated blade. The assembly may involve assembling the mold sections with a single distribution manifold. Each of the mold sections may be formed by assembling a sacrificial blade pattern and a sacrificial feeding passageway pattern (form) atop a plate. A shell may be applied to the blade pattern and feeding passageway form. The shell may be heated to melt at least a portion of each of the blade pattern and feeding passageway form.

[0007] Another aspect of the invention involves a method for casting parts. A ~~number~~ plurality of mold sections are formed. A cluster of the mold sections is assembled. A distribution manifold is assembled to the cluster. The distribution manifold has a pour chamber for receiving molten material and a ~~number~~ plurality feeder conduits each extending from the pour chamber toward an associated one or more of the assembled mold sections. The assembly may occur in a furnace. The mold sections may be inspected. The cluster may be of sections that have passed such inspection.

[0008] Another aspect of the invention involves a mold assembly having a ~~number~~ plurality of mold sections. A distribution manifold is assembled to the mold sections. The distribution manifold has a pour chamber for receiving molten material and a number of feeder conduits each extending from the pour chamber toward an associated one or more of the mold sections. There are a ~~number~~ plurality of filters, each positioned in an associated one of the feeder conduits.

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[0018] FIG. 1 shows a pattern assembly 20 including a blade pattern 22 and a feeding passageway pattern 24. The blade pattern has a root portion 26 formed in the shape of the ultimate blade mounting root (that mounts/secures the blade to a separate disk). ~~The blade pattern also has and~~ an airfoil portion 28 extending from the root portion and formed in the shape of the blade airfoil. Proximate the tip of the airfoil (at the bottom of the pattern as oriented), the blade pattern has a grain starter portion 30. An upper portion 32 extends from a proximal end of the root portion 26. The blade pattern is formed by molding wax over a ceramic core. In various locations the core 40 is exposed (e.g., through an illustrated gap in the grain starter and protruding from recesses in the upper portion). In the illustrated embodiment, the blade pattern is supported by the grain starter portion atop the upper surface of a metallic support plate 44. The upper portion has a flat upper surface 46 which abuts the underside of a top plate (not shown) and coupled to the bottom plate by connecting rods (also not shown) to hold the plates registered in a parallel, spaced apart relation. The exemplary top and bottom plates are formed essentially as sectors of a larger circular plate (e.g., 120° sectors with rounded corners).